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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,296	01/10/2002	Chris D. Constantinides	56783	6836
21874	7590	03/25/2005	EXAMINER	
EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205			SHEARIN, ANDREW J	
			ART UNIT	PAPER NUMBER
			3737	
DATE MAILED: 03/25/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/044,296		CONSTANTINIDES, CHRIS D.	
	Examiner		Art Unit	
	Andrew Shearin		3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☒ Claim(s) 6-15, 20-27 and 36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

1. The oath or declaration is defective because:
It does not include the notary's signature, or the notary's signature is in the wrong place. Also, the inventor has not signed the Oath and it is unclear who signed on his behalf and under whose authority.

Drawings

The drawings are objected to because Figures 1-3 appear to be hand drawn and Figures 5-10 should proper titles separate from any descriptions. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top

margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 5-15, 20-27, and 36 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim depends on another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 5-15, 20-27, and 36 are not been further treated on the merits.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 16-19, and 28-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Judd et al. (5910112) in view of Hogenkamp (09/873142). Judd et al. '112 teaches imaging cardiac and infarcted cardiac tissue with ²³Na and ³⁹K with an MRI (Judd et al. '112 col. 1, lines 47-53). Judd et al. '112 does not teach the use of an iron oxide contrast agent. Hogenkamp '142 does teach the use of an iron oxide contrast agent (Hogenkamp paragraph 214 and paragraph 220). It would have been

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obvious to one skilled in the art at the time the invention was made to use a contrast agent in order to improve the images detected by Judd et al. '112 by combining Judd et al. '112 with Hogenkamp '142. Judd et al. '112 describes known problems associated with ^{23}Na and ^{39}K imaging of the heart and its tissues (Judd et al. '112 col. 1, lines 61-66 and col. 2, lines 52-53). Hogenkamp '142 teaches using many different compounds, iron dextran included, that are used in diagnosing cardiac and cardiovascular diseases, including ischemia and its effects (Hogenkamp paragraph 004, 214 and 220).

Regarding claim 35, Judd et al. '112 teaches all aspects of the claim except wherein the contrast agent used is MION-46. Hogenkamp '142 does teach use of an iron oxide contrast agent, but does not explicitly state using MION-46. It would have been obvious to one skilled in the art at the time the invention was made to use MION-46 since MION-46 is an iron core dextran polymer that provides better contrast than standard dextran polymer (Jenkins (6321105) col. 4, lines 22-44).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Shearin whose telephone number is (571)272-4744. The examiner can normally be reached on 7:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on (571)272-4956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Eleonora M.
ELEONORA MANTISNERA
PRIMARY EXAMINER